

CLAIMS

1. A hydrogel adhesive comprising 10-60 wt% of a cross-linked hydrophilic polymer, 5-80 wt% of a water-soluble non-ionic humectant, and from about 10-85 wt% water, wherein the hydrophilic polymer is prepared by polymerizing a mixture which comprises at least 80 mole% of one or more weak-acid monomer units having a pKa above 3, the weak-acid monomer being more than 60 mole% in its salt form, the level of monomer in acid form in said hydrophilic polymer not exceeding 50 mole% of all monomer units and the hydrogel adhesive having a peel strength on PET of 0.3 to 5.0 N/cm and a stability index measured after 14 days SI_{x14} below 0.50.
2. A hydrogel adhesive according to claim 1 with a stability index measured after 14 days SI_{x14} below 0.10.
3. A hydrogel adhesive according to one of the claims 1 - 2 wherein the hydrogel adhesive does not contain any alkanolamine.
4. A hydrogel adhesive according to one of the claims 1 - 3, wherein the weak-acid monomer is selected from acrylic acid and methacrylic acid, preferably acrylic acid.
5. A hydrogel adhesive according to one of the claims 1 - 4, wherein the weak acid monomer is present from 60 mole% to 80 mole%, in its salt form.
6. A hydrogel adhesive according to one of the claims 1 - 5, wherein said water-soluble nonionic humectant is selected from polyhydric alcohols, and is preferably glycerol.
7. A hydrogel adhesive according to one of the claims 1 - 6, wherein the hydrophilic polymer comprises at least 90 mole% weak acid monomer units.
8. A hydrogel body adhesive according to one of the claims 1 - 7 with a pH value of 4.0 to 8.0.
9. A hydrogel adhesive according to one of the claims 1 - 8, wherein the water-soluble non-ionic humectant is glycerol, and the weak acid is acrylic acid.

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10. A hydrogel adhesive according to one of the claims 1 - 9, wherein the counterion for the acrylic acid unit in salt form is a mono, di, or tri-valent metal ion or combination thereof.
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11. A hydrogel adhesive with a stability index measured after 14 days SI_{14} below 0.10.
12. A hydrogel adhesive with a stability index measured after 14 days SI_{x14} below 0.10.
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13. A hydrogel adhesive according to one of the claims 11 - 12, wherein the hydrogel adhesive has a peel strength on PET of 0.3 to 5.0 N/cm.
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14. A hydrogel adhesive according to one of the claims 1 - 13 with a G'_{25} (1 rad/sec) in the range 100 to 20000 Pa.
15. A hydrogel adhesive according to one of the claims 1 - 14 where the residual monomer(s) concentration in the hydrogel adhesive is below 10000 ppm.
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16. A hydrogel adhesive according to one of the claims 1 - 15 which contain less than 100 ppb, of α,β -unsaturated carbonyl by-product(s) derived from said polyol(s) during polymerization, and wherein the level of residual starting monomer(s) is below 200 ppm.
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17. A hydrogel adhesive according to one of the claims 1 - 16 wherein the low levels of residual monomers, impurities and/or byproducts is achieved by treating (PRE-treatment and/or POST-treatment) with a compound that is capable of reacting with said residual monomers, impurities and/or byproducts.
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18. A hydrogel adhesive according to claim 17, wherein the compound capable of reacting with the residual monomers, impurities and/or byproducts is a nucleophile.
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19. A hydrogel adhesive according to claim 17, wherein the compound is sodium bisulfite.
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20. Use of the hydrogel adhesive according to one of the claims 1 - 19 for the attachment to mammalian skin.